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An examination of adolescent social interactions during a competitive task: Social ability and gender differences

by

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Abstract

The present study was designed to gain further understanding of the prosocial and negative strategies enacted by adolescents, identified to be at-risk or not at-risk for emotional behavioural difficulties (EBD), given a specific context in which the social goal was forced competition. Gender was included as a key variable given the mixed gender findings regarding prosocial and negative behaviours. One hundred and eight adolescents from grade 8 participated. Participants were placed in same-sex dyads and videotaped during a competitive task. At-risk adolescents and adolescents not at-risk for EBD did not differ in their prosocial behaviours, however, differences emerged in their negative behaviours. Differences in negative behaviours also appeared between target dyads (at risk/not at-risk) and comparison dyads (not at-risk/not at-risk). Gender differences in prosocial and negative behaviours were found.

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CHAPTER 1

Introduction

Overview of Issue

From the first year of life onward, social relationships play an important part in the lives of human beings. Given the importance of interpersonal relationships to basic human functioning, it is of no surprise that the social behaviours and interactions of humans have been greatly studied by researchers in many societies.

Prior to the 1970s, a great deal of attention was especially devoted to the exploration of negative social behaviours, while very limited, if any, attention was directed at the study of positive social behaviours (Eisenberg, 1982). Researchers' preoccupation with negative social behaviours was likely motivated by the detrimental consequences of such behaviours for individuals and society as a whole (Eisenberg & Fabes, 1998). In general, negative social behaviours, such as aggression, tend to have more salient effects on the functioning of a society, whereas, positive social behaviours, such as cooperation, tend to have more subtle effects.

Although the study of positive social behaviours was once largely neglected, since the 1970s, there has been a vast accumulation of literature in this area (Eisenberg, 1982). In recent times, the focus of social behaviour research has shifted, with particular emphasis directed at prosocial development and behaviour (Warden & Mackinnon, 2003). This shift in focus has been motivated, in part, by researchers' recognition that a fair and thorough understanding of human functioning necessitates examination of all facets of human functioning, both negative and positive (Warden & Mackinnon).

Several specific motivations have also been noted for the interest in positive behaviours. Developmental psychologists argue wider empirical evidence is needed to support theoretical explanations of the social behaviour of children (Nelson & Crick, 1999). Other researchers recognize a need for stronger agreement regarding the defining characteristics of prosocial behaviour, especially in light of the abundance of work done on the characterization of negative social behaviours (Rose-Krasnor, 1997). There is great value in understanding positive social behaviours given the important role they appear to play in the social development of youth (Eisenberg & Mussen, 1989). Some researchers also recognize a need for interventions which promote prosocial behaviours to counteract antisocial behaviours (Warden & Christie, 1997). Interventions which emphasize positive behaviours focus on youths' strengths rather than their weaknesses, promoting a sense of empowerment. Focusing on positive behaviours highlights the strengthening and building of needed skills, whereas, focusing on negative behaviours highlights the elimination of undesirable behaviours. According to Pakaslahti, Karjalainen, and Keltikangas-Jarvinen (2002), prevention and intervention efforts may be more effective by instructing "adolescents in what they ought to do instead of only telling them what it is wrong to do" (p. 137).

Undeniably, the study of prosociality has gained considerable importance. Nevertheless, it is important for researchers to continue to address both the positive and negative aspects of human nature and their complex interplay. A complementary approach promotes a balanced understanding of human nature given that negativity and destructiveness, as well as caring and kindness, are within the capacity of human beings (Eisenberg, 1986).

Overall, relatively more is known about the prosocial and negative behaviours of young children than adolescents (Eisenberg & Fabes, 1998). Many researchers recognize further investigation of adolescents' interpersonal behaviours, particularly their prosocial behaviours, is needed (e.g., Fabes, Carlo, Kupanoff, & Laible, 1999). Researchers' interest in the prosocial and negative behaviours of adolescents is not surprising given that social interactions outside of the family generally gain importance during adolescence. Indeed, the main objective of adolescence is to learn to become an autonomous being separate from the family. Consequently, an adolescent's need for a sense of connection with others is achieved more so through the peer group rather than the family (Baumeister & Leary, 1995). Thus, there is an increase in the salience of peer interactions and relationships on the functioning of adolescents.

In addition to changes in the social domain, adolescence is characterized by significant physical and psychological changes (Hendry, 1983). For some individuals, adolescence can be a stressful period of emotional extremes (Forehand, 1990). Hence, an important component to successfully navigating through adolescence is the ability to adapt to emotionally provocative situations. Therefore, it is relevant to examine adolescents' behaviours and interactions within a potentially stressful or emotionally provocative context.

In addition to having to face changes within the social, physical, and psychological domains, an estimated 12% to 15% of adolescents experience emotional and behavioural difficulties (EBD) (Merrell, 2003). Adolescents with EBD tend to "experience a marked reduction in their sense of self worth, as well as a significant deterioration in their academic, social, and general functioning" (Place, Wilson, Martin,

& Hulsmeier, p. 76, 2000). In fact, there is evidence of a positive association between social maladjustment during childhood and adolescence and difficulties later in life (Crick & Dodge, 1994). Given the deleterious consequences of EBD, effective interventions are of significant value. Researchers emphasize the importance of continued efforts to improve and strengthen the effectiveness of intervention strategies for youth with EBD (e.g. Carlo, Hausmann, Christiansen, & Randall, 2003).

As previously noted, the promotion of prosocial strategies combined with attention to the reduction of negative strategies is one avenue of intervention for EBD. To potentially increase the effectiveness of such an intervention approach, further examination of gender differences in prosocial and negative behaviours may be beneficial given that gender differences have been found in previous research (e.g., Coie & Dodge, 1998; Eisenberg & Fabes, 1998). That is, further insight into any differences in the salience of various prosocial and negative strategies among females and males may aid in the structuring of intervention efforts.

The present study was designed to examine group and gender differences between adolescents at-risk and not at-risk for EBD in relation to the prosocial and negative behaviours employed during a competitive task. In the literature, there is considerable evidence regarding the salience of negative behavioural tendencies among children with EBD. An aim of the present study was to explore whether this would hold true for adolescents identified to be at-risk for EBD within a specific social context in which the goal was forced competition. The present study was also aimed at the examination of any discrepancies between adolescents at-risk and not at-risk for EBD in the use of prosocial strategies during a competitive exchange. Furthermore, the present study was intended as

an exploration of the relevance of prosocial and negative behaviours among females and males given a competitive social goal. In order to address these areas of interest, adolescents' prosocial and negative interactions during a competitive dyadic exchange were directly observed.

CHAPTER 2

Literature Review

A brief review of the social behaviour literature is presented in the following chapter. A summary of social information processing (SIP) theory is provided followed by a discussion on the conceptualization of prosocial and negative behaviour from the SIP perspective. Next, the research is reviewed separately for prosocial and negative behaviour. The review of the research includes a discussion on the relationship between prosocial and negative behaviour and EBD and gender differences in prosocial and negative tendencies. Finally, the hypotheses of the current investigation are presented.

A Theoretical Framework for Understanding Social Behaviour

Social Information Processing Theory

Social adjustment has been defined as "the degree to which children get along with their peers; the degree to which they engage in adaptive, competent social behavior [sic]; and the extent to which they inhibit aversive, incompetent behavior [sic]" (Crick & Dodge, 1994, p. 90). That is, one direct way of sampling for social adjustment has been to look for the presence or absence of prosocial behaviour. In a considerable number of studies, the social behaviours of children and adolescents have been conceptualized within the framework of social information processing (Nelson & Crick, 1999).

As noted by Crick and Dodge (1994), certain propositions are consistent across models of SIP. From the SIP perspective, it is proposed that children and adolescents face social situations equipped with a set of biologically determined capabilities and a memory database comprised of past experiences. It is further proposed that children and adolescents receive an array of social cues as input when they face a social situation.

Hypothetically, these social cues are processed via a number of cognitive steps, ultimately leading to the enactment of social behaviours, which can be either prosocial or negative in nature.

Crick and Dodge (1994) make the above propositions in their reformulated model of SIP. Their reformulated model differs from previous models, however, in its conceptualization of the hypothesized multi-step social-cognitive process behind social behaviour. In the reformulated model, a more elaborative process is presented compared to previous models. Furthermore, the model is distinct in its emphasis on the cyclical, rather than linear, nature of this social-cognitive process, and the simultaneous, rather than sequential, processing of social information. As highlighted by the reformulated model, children and adolescents can be engaged in multiple SIP activities at any one time, with each cognitive step possibly influencing other steps through a series of feedback loops. Although different processing activities can occur simultaneously, there is, nevertheless, a logical sequence of steps to the processing of social information.

Six steps to SIP comprise Crick's and Dodge's (1994) reformulated model. During the first step, an individual selectively attends to, and subsequently encodes, both situational and internal cues. Next, during step two, the individual interprets these cues. By encoding and interpreting external and internal signals, an individual has ongoing information regarding the progress of a particular social exchange, and consequently, may be able to make appropriate adjustments to his or her behaviour.

At step three, the individual decides on a goal or desired outcome for the particular social situation. Following goal selection, during step four, possible behavioural responses to the social situation are accessed from memory; if the situation is

novel, new responses may be constructed. After accessing or constructing possible responses, an individual engages in step five, which involves an evaluation of these responses. The most positively evaluated response is chosen. Finally, at step six, an individual behaviourally enacts the chosen response.

The present study is focused on the social goal (competition) and behavioural enactment components of SIP. In regards to behavioural enactment, prosocial and negative response alternatives are examined. In the literature, there is a considerable amount of research on SIP mechanisms and aggressive behaviour. Although considerably less in volume, research on the suitability of the SIP model for prosocial behaviour can be found in the literature.

SIP Mechanisms Associated With Prosocial and Negative Behaviours

Much of the SIP research is focused on cue interpretation. The interpretation of cues is proposed to involve the process of making intent attributions, or in other words, the activity of inferring the motives behind others' behaviours. It is hypothesized that a hostile attributional bias underlies the behaviour of individuals with aggressive tendencies (Nasby, Hayden, & DePaulo, 1979). Biased towards hostile attributions, aggressive individuals consistently evaluate others' behaviours from a defensive or retaliatory stance; consequently, although the actual intent behind their peers' behaviour may be benign, individuals may engage in aggressive acts due to incorrectly perceiving hostility in their peers' behaviour.

In contrast, individuals with prosocial tendencies are hypothesized to possess a benign attributional bias. Instead of attributing hostile intent to others' behaviours, prosocial individuals tend to give their peers the benefit of the doubt, even when hostile

attributions may be justified. It is proposed that a benign attributional style is conducive to the enactment of prosocial behaviour, which can facilitate more positive social interactions and, in turn, healthier adjustment (Crick & Dodge, 1994; Rose-Krasnor, 1997).

In addition to attributional styles, emotion processes can influence cue interpretation. Emotion processes are hypothesized to affect what information is noticed and what meaning is attributed to that information. It is proposed that the interpretation of social information is often congruent with individuals' emotional states, and is affected by the intensity at which individuals experience emotions as well as their skill at regulating emotion. For example, an individual who is experiencing anger at an overwhelming intensity may be prone to interpret a social encounter in a negative manner, facilitating a negative behavioural response. In fact, there is evidence that individuals with aggressive tendencies experience difficulties in controlling their negative feelings (e.g. Crick, 1995). An individual who enters a social exchange feeling positive, on the other hand, may be prone to view the exchange in a positive light, promoting a prosocial behavioural response. Indeed, there is evidence that adverse emotions (particularly anger) and poor emotional regulation are negatively related to prosocial behaviour (Eisenberg & Fabes, 1998).

The enactment of social behaviour is also hypothesized to be associated with the formulation of social goals. It is proposed that goals reflecting concern for the maintenance and promotion of others underlie prosocial behaviour (Estrada, 1995), whereas, goals likely to be harmful to social relations (e.g. seeking revenge) underlie negative behaviour (Crick & Dodge, 1994). In general, it appears individuals who engage

in prosocial behaviour favor relational goals over instrumental goals, while the opposite appears true for individuals who engage in negative behaviour (Nelson & Crick, 1999). A focus on instrumental goals may be promoted by feelings of anger (Lemerise & Arsenio, 2000). Positive feelings, on the other hand, may lead to the construction of relationship enhancing goals which can serve to maintain pleasant moods (Lemerise & Arsenio).

As with cue interpretation, goal selection is proposed to be influenced by the intensity of an individual's emotions and the effectiveness of his or her emotional regulatory abilities. For example, an individual may pursue avoidant or hostile goals, subsequently leading to negative behavioural responses, in an attempt to reduce emotional overarousal. In addition to one's own affective signals, others' affective signals may influence social goals. Awareness of positive affective cues from others may facilitate the construction of relational goals which promote the enactment of prosocial behaviour.

According to SIP, whether an individual employs prosocial or negative interaction strategies also depends on the process of response generation and evaluation. Accessing response alternatives may cue the affective components attached to the mental representations of those strategies, affecting subsequent response selection. For example, when individuals experience negative emotions, they may be more likely to access and choose maladaptive responses if those strategies are associated with the reduction of aversive emotional states (Lemerise & Arsenio, 2000). Moreover, individuals who experience strong aversive emotions may become overwhelmed, and in turn, engage in preemptive processing (i.e. rapid, automatic, irrational processing of information) which may lead to selection of less effective interaction strategies (e.g. venting) (Crick &

Dodge, 1994). On the other hand, individuals who are effective at regulating their emotions are more likely to generate and select socially competent strategies (Saarni, 1999). It is further hypothesized that prosocial behaviour is due, in part, to favourable evaluations of prosocial strategies and negative evaluations of aversive acts. The reverse is hypothesized for negative behaviour.

As outlined in the above discussion, various SIP mechanisms are proposed to contribute to the enactment of both prosocial and negative behavioural strategies. In the following section, prosocial behaviour is examined.

Overview of Prosocial Behaviour

General Definition

In the early literature, prosocial behaviour and altruism are often used as interchangeable terms (Eisenberg, 1982). However, a distinction can be made between these terms in regards to motivation. Altruistic behaviour, intended for the benefit of another, is intrinsically motivated by, for example, internalized values or principles; there is no concern for extrinsic reward or the avoidance of punishment (Eisenberg & Mussen, 1989). Behaviours belonging in the prosocial domain, on the other hand, may be performed for a variety of reasons, including other-oriented, practical, or egoistic concerns (Eisenberg & Fabes, 1998). Broadly, prosocial behaviour is voluntary behaviour intended for the benefit of others or for the promotion of harmonious interpersonal relations, motivated by either other-oriented or self-oriented concerns (Bergin, Talley, & Hamer, 2003; Eisenberg & Miller, 1987; Hay, 1994; Naparstek, 1990). Altruism, therefore, is not interchangeable with prosocial behaviour, but is a subgroup of such

behaviour. Given that the underlying motivation of social behaviour can be difficult to assess, it seems prudent to focus on prosocial, rather than altruistic, behaviour.

Operationalization of Prosocial Behaviour

The main behaviours under the prosocial umbrella are sharing, helping, cooperation, and comforting. Sharing and helping are the most extensively studied behaviours within the prosocial literature. Research is also available on cooperation and comforting, although to a lesser degree than sharing and helping. Helping refers to behaviours in response to either direct requests for assistance or overt indications of the need for assistance, which lead to improvements in the circumstances of another person (Jackson & Tisak, 2001). Sharing, on the other hand, refers to acts in which a person attempts to improve the circumstances of another by giving up personal resources (Tisak and Ford, 1986). Cooperation refers to behaviours which indicate attempts to coordinate efforts with another person in order to achieve specific mutual goals (Nelson & Madsen, 1968). Finally, comforting refers to actions taken to improve another person's emotional state (Jackson & Tisak).

Recently, researchers have argued the above behaviours do not sufficiently represent the prosocial domain and, therefore, more research is required to explore prosociality beyond narrow traditional operationalizations (e.g. Bergin, Talley, & Hamer, 2003). Of particular concern for some researchers is that past investigations of prosocial behaviour are based on adult researchers' definitions of prosociality (e.g. Greener & Crick, 1999). In response to this concern, there are studies which were designed to explore what it means to behave prosocially for children and adolescents based on their perceptions of prosociality.

In one study, Greener and Crick (1999) found children's view of prosocial behaviour to be broader than the traditional view presented in past research. Although the children in Greener's and Crick's study reported sharing and caring as acts of being nice towards others, they also reported nontraditional behaviours, such as engaging in humor and telling secrets. Greener and Crick concluded that further research is needed on relationally inclusive prosocial behaviour (i.e. actions that initiate and sustain interpersonal relationships and imply a desire for ongoing interaction). Bergin, Talley and Hamer (2003) arrived at the same conclusion in their study of what prosocial behaviours adolescents consider to be relevant within their peer group. Nontraditional prosocial acts, such as being humorous and providing compliments or encouragement, appeared salient in the lives of the adolescents sampled. The researchers described the provision of compliments and encouragement as attempts to promote positive and contain negative emotional states in others. Indeed, they found that adolescents attributed the ability to facilitate others' emotional regulation to peers whom they deemed prosocial.

Erwin (1993) notes that when asked about their peer relations, children tend to emphasize the rules and obligations of friendship as they grow older. This is no surprise given that, as children move towards adolescence, their peer relations become increasingly central to their lives. Thus, it is seems reasonable to assume prosocial actions that reinforce rules of friendship, such as initiating and maintaining conversation, may be particularly salient among older children (Erwin).

In sum, prosocial behaviour is defined by a narrow range of behaviours in much of the past research. Recent evidence indicates that the prosocial domain is broader than traditional operationalizations. To gain an accurate understanding of prosociality, it is

necessary to explore beyond traditional behaviours arbitrarily chosen by researchers, and investigate behaviours reported as relevant by children and adolescents themselves (Bergin, et al., 2003; Grusec, Davidov, & Lundell, 2002). Indeed, in the present study, social engagement (e.g., partaking in friendly conversation, engaging in humour) is included in the operationalization of prosocial behaviour. Social engagement appears to be particularly relevant among adolescents, however, such behaviour has received limited attention in the prosocial literature.

Empathy as a Motivating Factor of Prosocial Behaviour

In addition to being aware of what behaviours constitute prosociality, it is important to understand what may motivate the enactment of those behaviours. In the literature, empathic concern has been consistently proposed as a motivator of prosocial behaviour (Eisenberg & Fabes, 1998). However, in an early meta-analytic review (Underwood & Moore, 1982), empathy was not found to be significantly related to prosocial behaviour. In recent times, evidence has emerged of a relationship between empathic concern and prosocial responding due, in part, to methodological advances in the assessment of empathy (Grusec, et al., 2002). A critical conceptual advance has been the conscientious differentiation between various empathy-related emotional reactions (Grusec, et al.). In particular, empathy and sympathy have been differentiated from personal distress.

Empathy and sympathy are other-oriented emotional reactions which arise from the comprehension of another's emotional state, and which may consequently lead to the enactment of other-oriented, prosocial behaviour (Eisenberg & Fabes, 1998). On the other hand, personal distress, due to the vicarious experiencing of another's emotion, is a

self-oriented emotional response involving aversive emotions such as anxiety (Eisenberg & Fabes). Personal distress is proposed to hinder prosocial behaviour because the individual experiencing the distress is primarily concerned with the alleviation of his or her own discomfort; personal distress is expected to lead to prosocial behaviour when that course of action is the easiest way to reduce one's own distress (Batson, 1991). Grusec and colleagues (2002) provide a summary of studies which have differentiated empathy and sympathy from personal distress, and which have implemented advanced methods in the assessment of empathy-related emotional reactions. In general, greater empathetic and sympathetic reactions to another's distress are associated with a higher tendency to behave prosocially. On the other hand, prosocial behaviour appears less likely when personal distress is experienced in response to another's emotional state.

Association of Perspective-Taking to Prosocial Behaviour

Consistently, perspective-taking skills have been proposed to increase the likelihood of identifying, understanding, and subsequently experiencing sympathetic and empathetic reactions to another's distress or needs (Eisenberg & Fabes, 1998). Perspective-taking has been divided into three subtypes: (1) perceptual (the ability to take another's perspective visually); (2) cognitive (the ability to predict and understand the thoughts, motives, intentions, and behaviours of another); and (3) affective (the ability to comprehend another's emotional state) (Eisenberg, 1986).

From the SIP perspective (e.g., Lemerise & Arsenio, 2000), cognitive and affective perspective-taking skills are expected to affect the occurrence of prosocial behaviour. For example, limited skills in perspective-taking can make it difficult to infer another's needs or distress, and in turn, lower the likelihood of choosing to provide

assistance as a behavioural response. Indeed, an overview of the research indicates children with more sophisticated perspective-taking capacities tend to exhibit higher prosocial tendencies (Eisenberg & Fabes, 1998). However, the evidence of a positive relationship between perspective-taking and prosocial behaviour is weak and inconsistent; this summary of the evidence is understandable given that the ability to take another's perspective does not invariably lead to prosocial cognitions or actions.

Perspective-taking is an information gathering process. What an individual does with the acquired information depends largely on his or her own needs and values (Eisenberg, 1986). For example, it is not far fetched to expect the negative emotional state of an individual who is depressed to overshadow any desire or ability to engage in behaviours that benefit others. As with an individual who experiences personal distress, the priority of an individual who is depressed may be to attend to oneself. Indeed, there is evidence of a self-focused orientation among individuals who are depressed (Tse & Bond, 2004).

Peer Influence on Prosocial Development and Behaviour

Regardless of whether perspective-taking does or does not facilitate prosocial behaviour, perspective-taking skills can be a valuable tool in peer interactions and relations. Since the earlier literature, theorists contend that positive peer relations are pivotal to the emergence of prosocial skills (Piaget, 1965; Sullivan, 1953). Children are the population investigated most extensively in regards to this theoretical position, with adolescents as the target population in very few studies (Wentzel & McNamara, 1999).

In the literature, peer interactions are proposed to provide unique opportunities for children and adolescents to learn and practice prosocial strategies (Grusec, et al., 2002).

For example, the reasoning behind children's prosocial actions apparently differ depending on whether the recipient is a peer or an adult (Eisenberg & Fabes, 1998). There is evidence that authority- or punishment-related reasons are behind children's prosocial responses to adults' requests, whereas, relational motives (e.g. the establishment of friendships) are behind their prosocial responses to peers' requests (Eisenberg, Lundy, Shell, & Roth, 1985; Youniss, 1980). Thus, the development of prosocial behaviour motivated by other-oriented concerns rather than compliance may be facilitated by peer interactions.

The influence of peer interaction on prosociality is also reflected in the tendency of children to engage in the prosocial acts modeled by their peers (Barton, 1981; Owens & Ascione, 1991). Furthermore, there is evidence of a positive relationship between prosocial behaviour and peer reinforcement of that behaviour; children considered to be assertive, sociable, and positive tend to receive more positive reinforcement for prosocial behaviour compared to children without such characteristics (Eisenberg, Cameron, Tryon, & Dodez, 1981; Lennon & Eisenberg, 1987). Therefore, socially competent individuals may receive more peer reinforcement for their prosocial behaviour, which in turn, may lead to an increase in prosocial responding. The prosocial behaviour of individuals lacking social competence, on the other hand, may not elicit positive peer reactions, which in turn, may lead to the discontinuance of prosocial responding.

According to Coyne's interactional model (1976), peer reaction is critical to one's functioning. According to this model, an individual's internalizing and/or externalizing behaviours and affect may eventually become aversive to those with whom the individual interacts; consequently, the individual may experience social rejection. This negative

reaction from others is proposed to maintain, and possibly increase, symptomatology. In several studies, negative reactions (including a lower tendency to engage in positive behaviours) have been demonstrated by the interaction partners of individuals with a variety of internalizing (e.g. depression, anxiety) and externalizing (e.g. hyperactivity, inattentiveness) tendencies (e.g., Bagwell, Molina, Pelham, & Hoza, 2001; Baker, Milich, and Manolis, 1996; Pope & Bierman, 1999; Segrin & Abramson, 1994).

There is considerable evidence on the relationship between peer acceptance versus rejection and prosociality. In general, popular and well-accepted children tend to be more prosocial than children who are rejected and unaccepted by their peers (Wentzel & Caldwell, 1997; Wentzel & Erdley, 1993). Thus, the use of prosocial strategies may be particularly low among individuals who experience peer difficulties.

It is proposed that the relationship between peer relations and prosocial behaviour is mediated by an individual's emotional functioning (Wentzel & McNamara, 1999). Hypothetically, ongoing social exchanges with peers lead to the development of subjective beliefs regarding the supportive nature of interpersonal relations. These beliefs, in turn, affect emotional well-being and subsequent displays of other-oriented competent behaviour. There is empirical evidence in support of this perspective. For example, adolescents who experience peer rejection report a less positive sense of self-worth relative to adolescents who enjoy more positive peer relationships (e.g., Harter, 1990). Furthermore, there is evidence of a negative relationship between emotional distress and prosocial responding (e.g., Wentzel & McNamara).

Indeed, in general, the ability to function effectively within one's social environment (e.g. facilitated through prosocial strategies) has been shown to be positively

related to an individual's psychological and adaptive functioning (Spence, 2003). Difficulties in personal functioning have not only been associated with deleterious consequences in one's present life but with maladjustment later in life. Thus, interventions for EBD are of great value. One perspective taken in intervention efforts involves the identification of behavioural strategies. A fair amount of research on prosocial strategies and EBD can be found in the literature.

Empirical Evidence of the Relationship Between Prosociality and EBD

Researchers have hypothesized that emotionality (i.e. the tendency to experience positive or negative emotions) affects prosocial behaviour (Eisenberg & Fabes, 1992). Although the empirical evidence is limited, positive affect has been correlated with a higher tendency to engage in prosocial behaviours (Denham & Burger, 1991; Farver & Branstetter, 1994), particularly with sympathetic and empathetic responses (Robinson, Zahn-Waxler, & Emde, 1994). On the other hand, negative emotionality (i.e. the tendency to experience externalizing types of emotions, such as anger, and internalizing types of emotions, such as sadness) has been negatively correlated with prosocial behaviours (Eisenberg & Fabes, 1998). In one study (Eisenberg, Fabes, Karbon, et al., 1996), children were asked to identify classmates most likely to help and share with others. Children who received prosocial peer nominations received lower scores on parent and teacher reports of their propensity to experience negative emotions, such as sadness and anxiety, compared to children who were not identified as prosocial by their peers. In another study (Eisenberg, Fabes, Murphy, et al., 1996), low negative emotionality was found to be positively associated with children's sympathetic responding.

In both of the above studies, a greater propensity towards prosocial behaviour was associated with effective attentional regulation. In the former study (Eisenberg, Fabes, Karbon, et al., 1996), boys who received prosocial peer nominations were evaluated by their parents and teachers as effective in focusing and shifting their attention. In the latter study (Eisenberg, Fabes, Murphy, et al., 1996), children with tendencies towards sympathetic responding also displayed effective attentional regulation. These finding are consistent with the proposed positive correlation between prosocial behaviour and general self-regulatory abilities (Eisenberg & Fabes, 1992). Empirical evidence in support of this relationship, although very limited, appears early on in the prosocial literature. Eisenberg, Fabes, Karbon et al., for example, note a study from the 1970s in which children characterized as fidgety, restless, aggressive, and overreactive to frustration were found to demonstrate a low propensity for sharing with others.

Given the above findings regarding negative emotionality and ineffective self-regulatory abilities, it is reasonable to hypothesize an inverse relationship between prosocial behaviour and EBD. Indeed, evidence has emerged indicating an association between the presence of externalizing symptomatology and low prosocial tendencies (Cohen & Strayer, 1996; Hughes, White, Sharpen, & Dunn, 2000).

In a longitudinal study (Hastings, Zahn-Waxler, Robinson, Usher, & Bridges, 2000), children were observed twice (4-5 and 6-7 years of age), during experimentally designed simulations of distress (e.g. mother pretended to hurt her foot). Each time they received a rating, from 1 (absent) to 7 (strong), on a scale designed to measure concern for others. This global rating was based on considerations of facial, vocalic, and behavioural expressions of empathy, sympathy, and helpfulness. Ratings of the children's

empathic tendencies were obtained from a self-report measure and a measure completed by the children's mothers. The children's teachers completed measures assessing the children's helpfulness and other positive behaviours (e.g. sensitive to other children's feelings). The self-, mother-, and teacher- reports were taken as additional indications of the children's global concern for others.

According to the study's findings (Hastings et al., 2000), by the second observation, children identified through parent and teacher reports as presenting with clinically significant externalizing symptomatology, decreased significantly in their observed concern for others. At the second time point, they were also found to have less concern for others relative to children classified within the subclinical and normative ranges, based on the aforementioned self-, mother-, and teacher- reports.

In another longitudinal study (Hay & Pawlby, 2003), children's prosociality was measured at ages 4 and 11. At age 4, children were administered a standardized cognitive test and engaged in an experimentally designed cooperative task with their mothers. Following both tasks, they received global ratings for cooperativeness. At age 11, the children completed a measure of general prosocial tendencies. This measure, which was also completed by the children's mothers and teachers, included particular items about sharing, helping, being considerate of other's feelings, and being kind. Information obtained from the children and their mothers was used to evaluate the presence of externalizing symptomatology. Overall, ratings for both cooperativeness at age 4 and general prosocial tendencies at age 11 were negatively correlated with externalizing symptomatology.

In both the aforementioned longitudinal studies, prosocial tendencies emerged as protective factors. That is, in these studies, prosocial tendencies appeared to ameliorate the severity and stability of externalizing symptomatology. In the study by Hastings et al. (2000), children who were observed to show more concern during the time one distress simulation were reported to have significantly fewer externalizing difficulties two years later. In the study by Hay and Pawlby (2003), children who were observed at age 4 to be more cooperative with their mothers had fewer externalizing difficulties at age 11. These findings are consistent with an earlier study in which 6 year old boys who displayed disruptive behaviours along with tendencies to engage in prosocial behaviour, engaged in fewer disruptive behaviours three years later relative to boys who were also disruptive but less prosocial (Tremblay, Vitaro, Gagnon, Piche, & Royer, 1992). In fact, there is evidence that the absence of prosocial behaviour during childhood is predictive of disruptive behaviours later in life (Haemaelaeinen & Pulkinnen, 1996).

To outside observers, externalizing symptomatology is generally more salient than internalizing symptomatology, due, in large part, to the direct repercussions of an individual's externalizing behaviours on those in their social environment. Consequently, the former type of symptomatology tends to be noticed, and subsequently reported, more than the latter type (Eisenberg & Fabes, 1998). This has resulted in much attention being directed at externalizing symptomatology in the prosocial literature. Nevertheless, there is evidence of a negative relationship between internalizing symptomatology and prosocial behaviour (LaFreniere, Provost, & Dubeau, 1992). In the earlier literature, individuals with depression were observed to be less cooperative while engaging in a modified version of the prisoner's dilemma game (Hokanson, Sacco, Blumberg, & Landrum,

1980). In another early study (Gibbons & Wicklund, 1982), individuals with depression were found to be self-focused. This self-focused attention was proposed to be an underlying factor in their lack of ability to attend to other's needs, and subsequently engage in helpful behaviour. These earlier findings are consistent with a more recent study in which emotional distress was associated with a lower tendency to engage in prosocial behaviour during early adolescence (Wentzel & McNamara, 1999).

Overall, a negative association between prosocial tendencies and EBD appears in the research. As with other areas in the prosocial literature, the majority of studies on prosociality and EBD are based on samples of children. This is important to consider given the evidence of age differences in prosocial behaviour.

Age Differences in Prosocial Behaviour

In the literature, there is general agreement that prosocial tendencies exist among even very young children. There is relatively less agreement concerning the developmental patterns (e.g. frequency) associated with the acquisition of prosocial behaviour (Eisenberg & Fabes, 1998). Overall, however, a linear relationship between prosocial behaviour and age is found in the research. That is, children generally demonstrate an increasing tendency to engage in prosocial behaviour as they grow older.

Although there is compelling evidence for the above relationship, some inconsistencies appear throughout the literature. These inconsistencies may be due, in part, to contextual characteristics. For example, in one study, children's generosity increased with age only when a researcher was present and relatively obtrusive (Zarbatany, Hartmann, & Gelfand, 1985). In other studies, the relationship between prosocial behaviour and age appears to be affected by the recipient of the behaviour (e.g.

a child may be more inclined to say they would comfort a friend than a stranger) (Jackson & Tisak, 2001; Radke-Yarrow, Zahn-Waxler, & Chapman, 1983).

A definitive conclusion about the relationship between prosocial behaviour and age is further complicated by evidence indicating different types of prosocial behaviour are of varying relevance to different age groups (e.g., Bergin, et al., 2003; Greener & Crick, 1999). This may be due, in part, to coinciding changes in sociocognitive processes (Eisenberg & Fabes, 1998). For example, the reasoning behind younger children's social behaviour tends to be relatively more self-oriented and hedonistic (Eisenberg, 1986). Furthermore, younger children, at the beginning of middle childhood, have been found to use self-centered concepts (e.g. evaluation of the rewards and costs of friendship) to describe their peer relationships (Erwin, 1993). On the other hand, as children grow older, the reasoning for their behaviour tends to be relatively more other-oriented, and there is a greater emphasis on the rules and obligations of friendship (Eisenberg; Erwin). These findings make sense given the increasing importance of the peer group as children transition from middle childhood to early adolescence.

Age-related increases and differences in prosocial behaviour are also proposed to be associated with perspective-taking abilities (Eisenberg & Fabes, 1998). From 2 to 3 years of age into adolescence, perspective-taking abilities dramatically improve (Eisenberg, 1986). An increased capacity to understand others' thoughts and feelings may lead to a higher frequency of prosocial responding. Moreover, an increase in the sophistication of perspective-taking skills may facilitate the enactment of more sophisticated behavioural strategies. For example, engagement in verbal, comfort-intended communications progressively increases in frequency and quality as children

grow older (Burleson, 1982). On the other hand, prosocial acts that are more concrete (i.e. sharing and helping) tend to be salient among younger children (Greener & Crick, 1999).

Based on the above findings, it is reasonable to assume that relationally inclusive prosocial behaviours are particularly salient among older children and adolescents. There is empirical support for this assumption as noted previously in the discussion on the operationalization of prosocial behaviour. Early adolescents, for example, tend to demonstrate higher rates of relationally inclusive acts such as comforting a friend, initiating conversation, or extending an invitation to a peer for lunch (Greener & Crick, 1999; Jackson & Tisak, 2001).

When younger children do engage in relationally inclusive behaviour, they tend to engage in acts that can be categorized as 'group inclusive' behaviour (e.g. inviting another child to join in a game) (Greener & Crick, 1999). Older children, on the other hand, tend to demonstrate more relationally inclusive behaviours directed at the dyadic level (Greener & Crick). Therefore, the increasing importance of the peer group with age may begin with concerns regarding global peer acceptance and eventually develop into concerns regarding the establishment of more intimate, one-on-one relationships.

In sum, there does appear to be age-related increases and differences in prosocial behaviour. Thus, it seems prudent to further explore prosociality among adolescents given that current knowledge on prosociality is largely based on studies of children. Another variable to consider is the adolescent's sex. An overview of the prosocial literature on gender is presented in the following section.

Gender Differences in Prosocial Behaviour

Theoretical Underpinnings

A predominant theory of gender development posits that boys and girls are differentially socialised to take on the attributes society considers typical and valued for their respective genders (Maccoby, 2000). According to this socialisation perspective, children experience positive reinforcement for gender-appropriate behaviour and negative consequences for gender-inappropriate behaviour from parents, teachers, other adult figures, and peers (Etaugh & Liss, 1992). Children's gender-appropriate tendencies originate not only from direct shaping by various socialisation agents, but also from the acquisition of knowledge about the stereotypical characteristics and social expectations of each gender (Maccoby, 1998). It is hypothesized that children use this knowledge to regulate their behaviour so they may conform to what society considers appropriate for their respective genders (Bussey & Bandura, 1999).

Empirical Evidence of Differential Socialization According to Gender Stereotypes

In general, females are expected to be interpersonally oriented (i.e. concerned about relationships, attentive and responsive to others), whereas, males are expected to be achievement oriented and relatively independent (Eisenberg & Fabes, 1998). Empirical evidence, although very limited, has emerged in support of the differential socialization of boys and girls according to these stereotypical gender roles. For example, findings indicate girls receive more encouragement than boys to display empathy (Zahn-Waxler, Cole, & Barrett, 1991), affectionate behaviours, and tender emotions (Huston, 1983). Findings also consistently indicate girls tend to be encouraged by their parents to play with dolls, which may in turn, foster nurturance (Maccoby, 1998).

In one study (Power & Shanks, 1989), parents reported encouraging prosocial behaviours (e.g. helping, cooperating, sharing, kindness, affection) among their daughters; in fact, their emphasis on prosociality increased with age for their daughters, but decreased with age for their sons. On the other hand, at all ages, boys were encouraged to develop self-care skills necessary for independent living. This is consistent with other findings indicating an emphasis on autonomy for boys by adults (Huston, 1983) and peers (Adler, Kless, & Adler, 1992).

Evidence has also emerged of the socialization of boys towards an achievement orientation. For example, in one study, parents provided boys with positive evaluative feedback about their achievements, whereas, they provided less praise and acknowledgement for the accomplishments of girls (Alessandri & Lewis, 1993). Parents, particularly fathers, have also been found to provide more opportunities and encouragement for their sons than their daughters to watch and participate in sports activities (Maccoby, 1998). Furthermore, from elementary to high school, males have been found to achieve high status among their peer group on the basis of their athletic ability (Adler, Kless, & Adler, 1992; Eder & Parker, 1987). Males' involvement in athletic activities, influenced by their parents and peers, can foster values concerning achievement and competition.

The encouragement of males' athletic ability highlights the value placed on males' physicality. For example, parents, particularly fathers, tend to encourage gross motor activity (Huston, 1983) and the development of manipulatory and visual-spatial abilities among their sons (Power, 1981); subsequently, males may place particular value on the ability to produce a direct effect on their environment. On the other hand, parents

and teachers tend to encourage girls to develop their verbal abilities (Fagot, Hagan, Leinbach, & Kronsberg, 1985; Power, 1981), which could foster adeptness at the interpersonal level.

Empirical Evidence of Gender Differences in Prosocial Behaviour

Given the above findings, it is reasonable to expect females to exhibit more prosocial tendencies than males in dyadic exchanges. Indeed, many empirical findings have emerged indicating females are more prosocially oriented than males (e.g. Carlo, Koller, Eisenberg, Da Silva, & Frohlich, 1996; Eisenberg, Carlo, Murphy, Van Court, 1995; Zahn-Waxler, Friedman, Cole, Mizuta, & Hiruma, 1996).

Gender differences in prosociality have been examined in a variety of ways. For example, Strough and Diriwachter (2000) examined creative stories written by same-gender dyads. They concluded that overt aggression was more prevalent in boys' stories, whereas, prosocial behaviour was more prevalent in girls' stories. Gender differences have also emerged from investigations of prosocial moral reasoning, which is "reasoning about moral dilemmas in which one person's needs or desires conflict with those of another" (Eisenberg, Miller, Shell, McNalley, & Shea, 1991, p. 849). In one study (Eisenberg, Miller, et al.), adolescent females, overall, used higher levels of reasoning (i.e. reflecting internalized abstract principles, self-reflective sympathy, and perspective taking) relative to adolescent males. Evidence emerged of an association between higher level prosocial reasoning and higher scores on self- and mother- reports of prosocial behaviour. This is consistent with past evidence of a positive, although moderate, association between level of moral reasoning and the frequency and quality of prosocial behaviour (Eisenberg, 1986).

Evidence of gender differences has also emerged from studies examining the effect of contextual factors on prosocial tendencies. In a couple early studies, Berndt (1981a, 1981b) reported that, compared to girls, boys were less likely to be helpful towards same-sex friends than towards strangers or acquaintances. According to Berndt, this finding implies that competitive tendencies exist within male friendships. If a boy feels he is placing himself at a disadvantage by helping a friend, he may be less likely to engage in helpful behaviour, and possibly, other prosocial behaviours. Given the competitive orientation of males, as indicated by many empirical findings (e.g. Berndt, 1985; Keil, McClintock, Kramer, & Platow, 1990; Knight & Kagan, 1981; Tassi & Schneider, 1997), boys may be expected to demonstrate lower prosocial tendencies than girls especially during conflictual situations.

In a study by Burford, Foley, Rollins, and Rosario (1996), children were paired-up with either same-sex or opposite-sex partners and given three stickers to share between themselves. Overall, girls were observed to share (i.e. gave the third sticker to their partner) more than boys. Furthermore, cooperation and mutual decision-making characterized girls' strategies for resolving the conflict, whereas, coercion and demandingness characterized boys' strategies.

Although boys were found to help and share less than girls in the above studies, boys generally tend to engage in helping and sharing more than other types of prosocial behaviour when they do act prosocially (Eisenberg & Fabes, 1998). In a study by Bergin, Talley, and Hamer (2003), adolescents were asked to describe the prosocial acts they have witnessed within their peer groups. 'Provides physical assistance' and 'shares' were two of the most frequently mentioned attributes for adolescent males, but not for

adolescent females. It is possible that when males do behave prosocially, they are prone to engage in prosocial behaviours which are physical and overt in nature.

On the other hand, Bergin et al. (2003) found 'provides emotional support', 'inclusive' (e.g. nice to everyone, even if they do not like them), and 'keeps confidences' among the most frequently mentioned attributes for adolescent females, but not for adolescent males. These attributes were classified as relational prosocial behaviours, indicating their main purpose is to benefit others through the enhancement of peer relations.

Eisenberg and Fabes (1998) cite a meta-analysis that revealed larger gender differences, in favor of girls, for indexes of kindness and considerateness than for indexes of helping and sharing. Larger gender differences also emerged in the meta-analysis with self-report and other-report data than with observational data. It has been suggested that gender differences that emerge from self- and other- report data may reflect people's conceptions of how females and males should behave rather than how they actually behave (Maccoby, 2000). That is, outside raters may endorse more prosocial behaviours for girls than boys, on a behavioural checklist for example, due to the influence of gender stereotypes. Furthermore, children may become more aware of, and even internalize, gender-specific stereotypes and expectations, which may lead to girls self-reporting stronger prosocial tendencies than boys. Nevertheless, in the meta-analysis reviewed by Eisenberg and Fabes, gender differences emerged favoring girls (although small), even for observational studies.

In summary, it is hypothesized that children are socialised to take on gender stereotypical attributes. Overall, females are expected to be other-oriented, whereas,

males are expected to be self-oriented. Empirical evidence has emerged indicating females and males behave congruently with these expectations. In particular, there is empirical evidence, although limited, indicating a greater tendency to engage in prosocial behaviour among females than males during adolescence.

Overview of Negative Behaviour

As indicated by the above review of the prosocial literature, a sizable amount of knowledge has accumulated on prosocial behaviour. Considerably more information has been presented in the social behaviour literature on negative behaviour.

Negative Behaviour Defined and Operationalized

Social behaviours are often conceptualized in terms of their consequences; hence, negative behaviours can be defined as aversive actions which increase the likelihood of detrimental consequences for others as well as oneself (Gresham, 1997). Within the category of negative behaviour, the predominant focus is aggression.

A summary of how aggression is defined is provided in a review by Underwood (2002). Underwood notes that across most definitions in the literature, aggression is conceptualized as behaviour (either physical or verbal) intended to harm the recipient, which subsequently results in the recipient's perception of being hurt. Underwood also discusses subtypes of aggression. Reactive aggression refers to angry, retaliatory responses. Proactive or instrumental aggression refers to dominant aggressive acts intended for the achievement of specific goals. Finally, relational aggression refers to behaviours in which the intent is to harm another person through deliberate manipulation and damage of that person's social relations.

Several studies have been aimed at the examination of physical and verbal aggression (see Crick & Dodge, 1994, for a review). Other specific behaviours have been included in empirical investigations of negative social behaviour. To assess negative behaviour, researchers have taken into account verbalizations that are derogatory towards oneself, the presence of a generally negative attitude (e.g. critical about one's environment), expressions of frustration, as well as the tendency to whine and complain (e.g., Baker, Milich, & Manolis, 1996; Grenell, Glass, & Katz, 1987; Heller & Tanaka-Matsumi, 1999; Pope & Bierman, 1999).

Within the category of negative social behaviour, there is an extensive literature on aggression. A brief overview of the aggression literature relevant to the current study is presented next.

The Role of the Peer Group in Aggressive Responding

The peer group is often investigated in the aggression literature. There are a number of studies on peer rejection. In some studies, aggression does not appear to be related to social rejection. This may be due, in part, to the type of aggressive strategy under investigation. For example, peer rejection appears to be more strongly associated with reactive and relational aggression than proactive aggression (e.g., Crick & Grotpeter, 1995; Price & Dodge, 1989). This makes sense in light of the different goals among these strategies. Although any type of aggression can be socially aversive, the goal of the two former strategies is of an interpersonal nature (e.g., getting revenge or disparaging a peer's reputation), whereas, the goal of the latter strategy tends to be of a non-interpersonal nature (e.g., object possession) (Coie & Dodge, 1998).

Social context may also affect whether a relationship appears between peer rejection and aggression (Coie & Dodge, 1998). For example, the use of aggressive strategies among nonaggressive peers tends to be associated with peer rejection, whereas, peer rejection tends not to correlate with the enactment of aggression within peer contexts where aggressive acts are frequent (Boivin, Dodge, & Coie, 1995; Wright, Giammarino, & Parad, 1986). Although the evidence is sparse, other features of the social context that appear to affect aggressive tendencies in general include the social roles of the participants of a social exchange and the activity in which they are engaged (Underwood, 2002).

Despite the inconsistencies, there is substantial evidence, overall, of a positive correlation between aggressive tendencies and peer rejection (see Coie & Dodge, 1998, for a review). SIP mechanisms appear to play a role in this relationship. For example, there is evidence that aggressive children who experience peer rejection tend to adopt hostile attributional biases which, in turn, predisposes them towards increases in aggressive responding with age (e.g. Bierman & Wargo, 1995).

Due to the correlational nature of the research, it is impossible to definitively conclude whether aggression leads to peer rejection or vice versa. Irregardless of the exact nature of the relationship, there is convincing evidence that peer rejection and aggression is associated with adjustment difficulties (Coie & Dodge, 1998; Underwood, 2002). Indeed, there is considerable research on the association between aggression, as well as other negative behaviours, and EBD.

Empirical Evidence of the Relationship Between Negative Behaviour and EBD

Investigation of the relationship between negative behavioural strategies and EBD is in line with a social skills deficit perspective. Social skills represent the ability to engage in behaviours which facilitate appropriate, effective social interactions (McFall, 1982; Spence, 2003). It is hypothesized that deficient social skills contribute to difficulties in interpersonal functioning and relationships (Asher & Renshaw, 1981), and are thereby associated with EBD (Lewinsohn, 1974; Spence, 2003). The tendency to engage in maladaptive interaction strategies is one way deficient social skills have been conceptualized (Magee Quinn, Kavale, Mathur, Rutherford, & Forness, 1999).

In the literature, a positive relationship between aggressive tendencies and internalizing difficulties has emerged. In a study comprised of a 6th grade sample (Capaldi, 1991), aggression was associated with depressed mood. In another study (Crick & Grotpeter, 1995), peer nominations of overt aggression were associated with self-reports of depression among 3rd to 6th graders. In their review of the literature, Segrin and Abramson (1994) noted that individuals with depression can display an active behavioural profile, typically characterized by hostility, aggression, and negative verbalizations regarding themselves, their interaction partners, and their environment in general.

Deficient social skills have also been associated with externalizing difficulties. In a study by Grenell, Glass, and Katz (1987), children classified as hyperactive were found to generate response strategies characterized as less friendly and less relationship enhancing when presented with hypothetical situations involving interpersonal conflict. It is possible that the impulsiveness associated with hyperactivity makes it difficult for

children to delay their desire to get their own way, which is a short-term goal, in favor of any possible desire to maintain positive feelings between themselves and other children, which is a relatively longer-term goal (Grenell et al.).

In addition to children's social knowledge, Grenell and her colleagues (1987) were interested in children's actual behaviour during dyadic exchanges. During a structured task, in which children worked together to complete puzzles, hyperactive children were found to engage in more negative behaviours (e.g. critical comments directed toward partner) than their nonhyperactive counterparts. The two groups did not significantly differ, however, in their positive behaviour (e.g. being helpful, giving praise).

In often cited studies from early in the literature (Klein & Young, 1979; Pelham & Bender, 1982), researchers similarly found that hyperactive children did not differ from their nonhyperactive counterparts in regards to positive behaviours and interactions, however, they engaged in significantly more negative behaviours and interactions. In recent work (Merrell & Boelter, 2001), both deficits in socially skillful behaviour and excesses in negative behaviour were found to be associated with attention deficit hyperactivity disorder (ADHD); however, a stronger association emerged with negative behaviour. Indeed, an association between aggression and ADHD has consistently been found in the research (Coie & Dodge, 1998).

Irritability-inattention and disruptiveness-hyperactivity are symptoms of ADHD that have been found to be highly associated with interpersonal difficulties (Pope & Bierman, 1999). These symptomatic behaviours are characteristic of not only externalizing, but also internalizing difficulties (Finnegan, Hodges, & Perry, 1996). It is

proposed that these behaviours are indicative of underlying deficits in core cognitive and emotional regulatory systems (Pope & Bierman). The existence of such deficits may be reflected in the difficulty of treating negative behaviours (Magee Quinn et al., 1999). Given these deficits, individuals with EBD would be predisposed towards maladaptive tendencies. Hence, the interaction styles of individuals with EBD may be expected to be characterized more prominently by excesses in negative behaviour than by deficiencies in prosocial behaviour.

The salience of negative strategies among individuals with EBD is consistent with the SIP perspective. It is reasonable to assume that aggressive or maladaptive strategies are prominent in the mentally-stored repertoires of individuals with EBD; indeed, the presence of maladaptive tendencies is the basis for the identification of EBD. Hence, it may be argued that maladaptive script responses are particularly well developed among individuals with EBD so that they are more easily primed, resulting in a higher likelihood of accessing and subsequently enacting maladaptive behaviours (Coie & Dodge, 1998).

Developmental Patterns in Negative Behaviour

There is great interest in interventions for negative behavioural strategies given their apparent association with social and psychological difficulties (Underwood, 2002). It is logical to assume that the comprehensiveness of information on negative behaviors can influence the degree to which interventions are effective. In light of this assumption, it is important to recognize that investigations on negative behaviour largely involve samples of children. This is important to note given there is evidence of differences in negative behaviour, particularly aggression, within different developmental stages. The

following overview of developmental patterns in aggression is based on reviews by Underwood (2002) and Coie and Dodge (1998).

During the preschool years, physical aggression is salient. However, over the course of the preschool period, a decline appears in physical aggression. Physical aggression may begin to decline due to the better use of language to express one's needs, a further developed ability to internally regulate emotions, and an increase in empathetic responding. Language development may also facilitate, in part, the increase of verbal aggression during this developmental period.

Into the early school years and middle childhood, physical aggression continues to decline while verbal aggression increases (Underwood, 2002). During these developmental periods, differences emerge not only in the frequency, but also in the form and function of aggressive strategies. Aggressive strategies in the preschool years tend to be of an instrumental nature, whereas, aggressive strategies during the elementary years become increasingly person-oriented and hostile. Indeed, relational aggression appears to be a salient strategy during middle childhood. Given that the peer group becomes increasingly important as children grow older, the most effective way of inflicting harm on someone may be through their social relations.

Furthermore, during the early school years, reactive aggression in particular tends to be associated with peer rejection (Underwood, 2002). This makes sense given that reactive aggression is a retaliatory reaction that involves a strong aversive emotion (i.e. anger); thus, the recipient of reactive aggression is likely to interpret the aggressive act as a personal attack. During middle childhood, reactive aggression continues to be strongly

associated with peer rejection, while proactive aggression begins to be associated with peer dislike among older groups.

Overall, the decline in aggressive behaviour continues as children enter adolescence. This decline in aggressive behaviour with age is consistent with normative development. Along with the increasing importance of social relations comes a growing recognition of the importance of being in control of one's emotions, which in turn, promotes the development of emotional regulatory abilities. In light of these normative trends, it is understandable why children and adolescents who resort to aggressive tactics tend to be viewed as deviant, disordered, or at risk for psychopathology.

Gender Differences in Negative Behaviour

In addition to developmental stage, gender appears to affect aggressive tendencies. Overall, few gender differences in the frequency of aggressive behaviour appear in infancy and toddlerhood; however, by the time children interact in naturally occurring school settings, gender differences become striking (Coie & Dodge, 1998). Generally, males engage in more physically and verbally aggressive acts, in both hostile and instrumental ways, than females (Underwood, 2002). Gender differences widen even further with age possibly due, in part, to females' tendency to outgrow oppositional tendencies faster than males (Richman, Stevenson, & Graham, 1982).

As previously discussed, it is hypothesized that males and females are socialized to adopt self- and other- orientations, respectively (Maccoby, 2000). An orientation towards oneself may promote the enactment of self-rewarding behaviours. Indeed, there is evidence that males tend to be more competitive, and that a competitive nature tends to be associated with the use of aggressive tactics (Tassi & Schneider, 1997). In contrast,

there is evidence that females are more likely to withdraw from competition (e.g. for objects) (e.g., Charlesworth & Dzur, 1987).

Based on research with children, it appears that when females do behave aggressively, they are more likely to engage in relational rather than physical aggression (Underwood, 2002). Females do not necessarily engage in more relational aggression than males, but rather, when females do employ aggressive strategies they appear more likely to engage in relational aggression (Underwood). Because females are socialized towards relationships, it may be expected that when they do act maladaptively, they are predisposed to do so in an interpersonal way. Furthermore, the tendency to engage in relational aggression, which is often manifested verbally (i.e. verbal rejection, belittling comments), may predispose females towards aggressing verbally.

Gap in the Literature

The majority of the social behaviour research has focused on young children, with disproportionately less research conducted with adolescents. An accurate and fair representation of adolescents' social behaviour cannot be achieved based on research largely conducted with young children, given the evidence of developmental differences in both prosocial and negative behaviours.

Besides the need to present a more representative picture of adolescents' social behaviour, there are other reasons why the exploration of adolescents' social behaviours may be of interest. Adolescence is a time of trying to establish a sense of identity. As part of this process, adolescents may become more aware of gender expectations and roles, and subsequently, behave accordingly (Nichols & Good, 2004). Thus, adolescents present a unique opportunity to investigate gender differences in social behaviour. As part of

establishing a sense of identity, adolescents strive for autonomy from their families. Generally, as adolescents disconnect from their families, their peers play a more central role in their lives. This may pose a particular difficulty for individuals with EBD. Consistent with social skills deficit theory, individuals with EBD experience peer difficulties, and these difficulties, in turn, serve to maintain and possibly exacerbate symptomatology. Given that the peer group becomes increasingly important as adolescents attempt to achieve a sense of autonomy, and given the social nature of EBD, adolescence may be a particularly tumultuous time for individuals with EBD. Thus, it seems prudent to acquire more knowledge on adolescents with EBD in the hopes of gaining further insight into effective interventions.

Purpose of the Study

The purpose of the present study was to acquire further knowledge of the prosocial and negative strategies employed by adolescents, identified through teacher-report to be at-risk or not at-risk for EBD, during a competitive activity. In addition, gender was included as a key variable given the mixed gender findings.

Hypotheses

1. Adolescents at-risk for EBD were expected to engage less frequently in prosocial strategies than adolescents not at-risk for EBD during a competitive dyadic exchange. This hypothesis was based on SIP theory and previous findings (e.g., Cohen & Strayer, 1999; Hay & Pawlby, 2003; Wentzel & McNamara, 1999). Moreover, in accordance with socialization of gender theory and past research (e.g., Burford et al., 1996; Strough & Diriwachter, 2000), prosocial strategies were expected to be employed more frequently by females than males.

2. In line with SIP theory and previous findings (e.g., Merrell & Boelter, 2001; Segrin & Abramson, 1994), adolescents at-risk for EBD were expected to engage more frequently in negative strategies than adolescents not at-risk for EBD during a competitive dyadic exchange. Moreover, based on socialization of gender theory and Underwood's (2002) brief review of the aggression literature, males were expected to engage in more negative physical behaviour than females, whereas, females were expected to engage in more negative verbal behaviour than males.
3. It was predicted that dyads comprised of an adolescent at-risk for EBD and an adolescent not at-risk for EBD (target dyad) would demonstrate a lower frequency of prosocial interactions and a higher frequency of negative interactions than dyads comprised of two adolescents not at-risk for EBD (comparison dyad). This hypothesis was formulated in accordance with interactional theory and prior research (e.g., Baker et al., 1996; Pope & Bierman, 1999).
4. In line with findings on the relationship between reported behaviour (both self and other) and observed behaviour (Hastings, et al., 2000; Hay & Pawlby, 2003), it was expected that observed prosocial strategies would be positively correlated and observed negative strategies would be negatively correlated with teacher-reported adaptive skills and personal adjustment ratings.

CHAPTER 3

Research Methods and Design

In this chapter, a description of the participants involved in the present study is provided. The measures administered and the procedures followed are discussed. Ethical practices are also reviewed.

Participants

Adolescents involved in the present study are from a larger study of conflict resolution and social competence of children and adolescents. The adolescent sample of the larger study consisted of 237 grade 8 students from 5 junior high schools in the greater Edmonton area. The schools and participants were representative of white middle class communities with 99% Caucasian representation. More detailed information regarding cultural groups was not obtained due to school board privacy policy. For the present study, data from 108 students from the larger sample were examined. Of the 108 students, 72 were male and 36 were female with a mean age of 13.67 years for the total sample ($SD = 0.58$).

Measures

Two different measures were used in the present study. These measures included both the self and teacher forms of the Behavior Assessment System for Children (BASC; Reynolds & Kamphaus, 1992) and a videotaped competitive dyadic task.

Measures of Behavioural Functioning

The Behavior Assessment System for Children. (BASC; Reynolds & Kamphaus, 1992). The BASC is a comprehensive system for assessing the behaviour of children and adolescents. For the collection of information from multiple informants, the BASC has

parent-, teacher-, and self- report forms, with different versions for children and adolescents. The BASC teacher-report and self-report forms for adolescents were collected for the present study.

The BASC Teacher Report Form (TRF) is comprised of statements describing maladaptive and adaptive behaviours. Maladaptive behaviours include externalizing (e.g. aggression, hyperactivity) and internalizing (e.g. anxiety, depression) symptomatology, as well as school-related difficulties. Adaptive behaviours include skills in a variety of areas, such as adaptability, leadership, interpersonal relations, and school. Teachers are asked to rate the frequency of behaviours over the past six months. For example, they are required to rate each statement on a scale from 1 (Never) to 4 (Almost Always). For the TRF, *T-scores* (M=50, SD=10) and percentiles are calculated for five composite scales (Clinical Maladjustment, Internalizing Problems, Externalizing Problems, School Problems and Adaptive Skills), as well as for each of their subscales. Internal consistency and test-retest reliability coefficients reported for the TRF range from .80 to .90 and from .70 to .80, respectively (Merrell, 2003).

The BASC Self Report of Personality (SRP), similar to the TRF, is comprised of statements reflecting clinical symptomatology, interpersonal adjustment, and adaptive competencies. Unlike the four-point rating scale of the TRF, a true or false format is employed in the SRP. For the SRP, *T-scores* and percentiles are calculated for four composite scales (School Maladjustment, Clinical Maladjustment, Personal Adjustment, and Emotional Symptoms Index), as well as for each of their subscales. As reported in the manual, the internal consistency reliability of the SRP ranges from .80 to .90. The test-

retest reliability of the adolescent version of the SRP has been reported to range from .81 to .86 (Merrell, 2003).

Measure of Prosocial and Negative Behaviours

Competitive Dyadic Task. To assess adolescents' prosocial and negative behaviours in competitive dyadic exchanges, participants were videotaped in a competitive situation. The scenario was set up in the following manner. At the start of the scenario, each dyad was instructed to pick a team leader who would select a KNEX (similar to LEGO) model to build. Once a leader was chosen, two KNEX designs (a catamaran and a motorbike) were placed in front of the leader. The instruction was given to choose one design. Although the dyad was initially told that the leader would select the design, how the decision was made was left up to the dyad. For example, the decision could have been one-sided, with one participant's opinion dominating, or it could have been the result of a collaborative effort.

Once a design was chosen, the dyad was given KNEX pieces to build two copies of the design. Each participant was instructed to build his or her own model of the chosen design. Participants were not informed that there were not enough pieces to build two complete models. They were instructed to work as quickly as possible and that the first person to finish would be entered into a draw for a gift certificate to a music store. They were told they have approximately 15 minutes and were instructed to get the research assistant, who would be waiting outside of the room, when the first model was finished.

Once the above instructions were given, the dyad was left alone to work on the task. The research assistant re-entered the room when a participant informed the research assistant that he or she was done or when the time limit elapsed. The dyad was asked who

was the fastest at the building the model and whose name should be entered into the draw. The scenario concluded when a decision was made as to whose name would be entered. Once the task was administered to all the dyads at a school, participants were informed during a debriefing that pieces were missing and that all participants would be entered into the draw.

Ethical Practices

An ethics proposal was drawn up for the larger study which included detailed information regarding the nature and purpose of the study, as well as the procedures for obtaining informed consent and ensuring participant confidentiality. The proposal was reviewed and approved by the Department of Educational Psychology Research and Ethics Committee at the University of Alberta. For the present study, a separate ethics proposal based on the original proposal was submitted for review. Ethics approval was granted for the study.

Procedure

In the larger study, permission was obtained from the principal and teachers at each school. Students were approached about the study once permission was granted. Students received an information letter (See Appendix C) and a consent form (See Appendix D) to bring home to their parent(s)/guardian(s). Only students who returned a signed parent/guardian consent form were included in the study. Once parent/guardian consent was obtained, data collection began.

For screening purposes, the BASC-TRF was completed for each participant at the beginning of data collection. A score at least one standard deviation above the mean on the externalizing scale and/or internalizing scale of the BASC-TRF was required for a

participant to be identified as at-risk for EBD. To be identified as a comparison (not at-risk) participant, participants had to receive scores within one standard deviation above the mean or below the mean on both the externalizing and internalizing scales of the BASC-TRF. All participants completed the BASC self-report form for adolescents within a group administration setting, although not for screening purposes.

Once BASC-TRF scores were computed, participants were assigned to same-sex dyads. There were two types of dyads. A target dyad was comprised of a participant identified to be at-risk for EBD on the BASC-TRF paired with a randomly chosen participant identified as not at-risk for EBD. A comparison dyad was comprised of randomly paired participants identified through the BASC-TRF as not at-risk for EBD. There were twenty-seven target dyads and 27 comparison dyads for a total sample of 54 dyads. Each group had 18 male dyads and 9 female dyads.

Each dyad was administered the competitive task. Administration of the task took place in a private room in the school. The room was reserved for the researchers by school staff for the purposes of videotaping (i.e. no other students or adult figures were in the room during administration of the KNEX task). Following the completion of data collection, the videos of each dyad were observed and coded for prosocial and negative behaviours using The Observer™ by Noldus (a computerized observational assessment system). Prosocial and negative behaviour coding schemes were used to examine the observational data. The prosocial behaviour coding scheme (See Appendix A) was comprised of helping, sharing, cooperation, provision of emotional support, and social engagement. The negative behaviour coding scheme (See Appendix B) included negative physical behaviour, negative verbal behaviour, general negative talk, self-directed

negative talk, and sulking. Analyses of the observational data were conducted following the completion of coding.

CHAPTER 4

Results

In this section, the results of the study are presented. The results from preliminary analyses to determine interrater reliability of the prosocial and negative behaviour coding schemes are presented first. Next, the results from analyses conducted in order to address the study's hypotheses are presented. To address the hypotheses, three statistical tests were used to analyze the data from the two measures used in the study. An alpha level of .05 was used for all statistical tests.

For the purposes of assessing differences between at-risk and comparison adolescents, the comparison participants from target dyads and one randomly selected participant from each comparison dyad were not included in the analyses. Thus, for a subset of the analyses, 54 individual participants (27 at-risk participants from target dyads, 27 comparison participants from comparison dyads) were involved. Participants who were not included in the aforementioned analyses were included in another subset of analyses examining dyadic influences. For these dyadic analyses, all 108 participants who formed the total sample of 54 dyads were involved.

Preliminary Analyses

In order to obtain interrater reliability on the prosocial and negative coding of the videotapes, 15% of the videos were randomly selected and independently coded by both the author and another researcher. Separate Cohen's *kappas* were computed for prosocial and negative behaviours. The *kappas* were .88 for social engagement, 1.00 for helping, 1.00 for sharing, 1:00 for emotional support, 1.00 for negative physical, .99 for negative verbal, 1.00 for negative general talk, .96 for negative self talk, and .91 for sulking. There

were no occurrences of cooperation, thus, it was not possible to compute a kappa for this behaviour. Overall, the interrater reliability was excellent across all categories.

Observed Prosocial and Negative Behaviours

Group (at-risk/comparison) and Gender Differences.

Hypothesis 1: It was expected that adolescents at-risk for EBD would employ fewer prosocial strategies than their comparison counterparts during a competitive task. Moreover, it was expected that prosocial strategies would occur more frequently among females than males.

To assess main and interaction effects between at-risk status, gender, and observed prosocial behaviour, a MANOVA was conducted with at-risk status and gender as the independent variables and helping, sharing, cooperation, social engagement, and emotional support as the dependent variables. The main effect of at-risk status on prosocial behaviour was not significant, $F(5, 46) = 1.41$, *ns*. The main effect of gender on prosocial behaviour, however, was found to be statistically significant, $F(5, 46) = 2.64$, $p = .035$ ($\eta^2 = .22$, Power = .75). Univariate analyses for gender showed a significant effect for helping, $F(1, 50) = 6.17$, $p = .016$ ($\eta^2 = .11$, Power = .68), but not for cooperation, sharing, or social engagement. (See Table 1 for means and standard deviations.) That is, females ($M = 2.22$, $SD = 2.81$) were observed to help their partners more frequently than males ($M = 0.80$, $SD = 1.39$). A trend appeared with the provision of emotional support, $F(1, 50) = 3.68$, $p = .061$ ($\eta^2 = .069$, Power = .46). Although not statistically significant, females ($M = 0.61$, $SD = 1.14$) were observed to be more emotionally supportive towards their partners than males ($M = 0.19$, $SD = 0.46$). An interaction effect between at-risk status and gender did not occur for prosocial behaviour, $F(5, 46) = 1.73$, *ns*.

Hypothesis 2: It was expected that adolescents at-risk for EBD would demonstrate a higher frequency of negative strategies than comparison adolescents during a competitive task. Moreover, it was expected that negative physical behaviour would be employed more frequently by males and negative verbal behaviour would be employed more frequently by females.

To assess main and interaction effects between at-risk status, gender, and observed negative behaviour, a MANOVA was conducted with at-risk status and gender as the independent variables and negative physical behaviour, negative verbal behaviour, general negative talk, negative self talk, and sulking as the dependent-variables. The main effects of at-risk status, $F(5, 46) = 3.45$, $p = .010$ ($\eta^2 = .27$, Power = .87), and gender, $F(5, 46) = 3.59$, $p = .008$ ($\eta^2 = .28$, Power = .88) on negative behaviour were found to be statistically significant. (See Table 2 for means and standard deviations.)

Univariate analyses for at-risk status showed a significant effect for negative verbal behaviour, $F(1, 50) = 7.04$, $p = .011$ ($\eta^2 = .12$, Power = .74), and general negative talk $F(1, 50) = 4.81$, $p = .033$ ($\eta^2 = .08$, Power = .57), but not for negative physical behaviour, sulking, or negative self talk. Comparison adolescents were observed to engage in negative verbal behaviour more frequently ($M = 7.14$, $SD = 9.00$) than at-risk adolescents ($M = 2.51$, $SD = 3.45$). On the other hand, at-risk adolescents were observed to engage in general negative talk more frequently ($M = 8.77$, $SD = 8.63$) than comparison adolescents ($M = 5.11$, $SD = 4.10$). Univariate analyses for gender showed a significant effect for negative self talk, $F(1, 50) = 12.51$, $p = .001$ ($\eta^2 = .20$, Power = .93), but not for negative verbal behaviour, negative physical behaviour, sulking, or general negative talk. Specifically, females were observed to engage in negative self talk more

frequently ($M = 4.94$, $SD = 4.06$) than males ($M = 1.72$, $SD = 2.51$). An interaction effect did not occur between at-risk status and gender for negative behaviour, $F(5, 46) = 1.25$, *ns*.

Dyadic Effects.

Hypothesis 3: Target dyads were expected to demonstrate a lower frequency of prosocial interactions and a higher frequency of negative interactions than comparison dyads.

Multivariate analyses were conducted to assess the effect of dyad type on prosocial and negative behaviours. The MANOVA on prosocial behaviour revealed no significant differences between target dyads and comparison dyads, $F(5, 102) = 0.99$, *ns*. A significant main effect for dyad type, however, was found in the MANOVA on negative behaviour, $F(5, 102) = 5.51$, $p = .000$ ($\eta^2 = .21$, Power = .98). Univariate analyses showed significant effects for negative verbal behaviour, $F(1, 106) = 11.58$, $p = .001$ ($\eta^2 = .09$, Power = .92), and sulking, $F(1, 106) = 7.32$, $p = .008$ ($\eta^2 = .06$, Power = .76), but not for negative physical behaviour or negative self talk. (See Table 3 for means and standard deviations.) Specifically, comparison dyads were observed to engage in more negative verbal behaviour ($M = 6.75$, $SD = 8.42$) than target dyads ($M = 2.50$, $SD = 3.68$), whereas, target dyads were observed to engage in more sulking ($M = 2.98$, $SD = 4.77$) than comparison dyads ($M = 1.11$, $SD = 1.73$).

Links Between Actual Behaviour and Reported Behaviour

Hypothesis 4: It was predicted that observed prosocial strategies and observed negative strategies would be positively and negatively correlated, respectively, with teacher ratings of adaptive skills and personal adjustment ratings on the BASC.

Pearson product moment correlations were used to assess a possible positive relationship between actual prosocial behaviour and reported adaptive behaviour. In addition, a possible inverse relationship between actual negative behaviour and reported adaptive behaviour was assessed. Results of correlations between observed prosocial and negative behaviours and reported adaptive behaviour are presented in Table 4. Significant negative correlations were found between observed negative behaviours and reported adaptive behaviour. Although these correlations were significant, they accounted for only 7% to 8% of the variance. Therefore, they should be interpreted with caution. Observed prosocial behaviours did not significantly correlate with either teacher- reported adaptive behaviour or personal adjustment ratings.

Table 1

Means and Standard Deviations of Observed Prosocial Behaviours for At-risk Status and Gender

	Observed Prosocial Behaviours									
	HE		SH		CO		SE		ES	
At-risk Status	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
At-risk										
(N=36) Male	0.55	1.04	0.11	0.32	0.05	0.23	8.77	8.09	0.27	0.57
(N=18) Female	2.77	3.76	0.11	0.33	0.00	0.00	10.88	5.44	0.33	0.70
Total	1.29	2.49	0.11	0.32	0.03	0.19	9.48	7.28	0.29	0.60
Not at-risk										
(N=36) Male	1.05	1.66	0.22	0.54	0.11	0.32	8.33	7.90	0.11	0.32
(N=18) Female	1.66	1.41	0.22	0.44	0.33	0.50	13.00	8.26	0.88	1.45
Total	1.25	1.58	0.22	0.50	0.18	0.39	9.88	8.17	0.37	0.92
Total										
(N=72) Male	0.80	1.39	0.16	0.44	0.08	0.28	8.55	7.89	0.19	0.46
(N=36) Female	2.22	2.81	0.16	0.38	0.16	0.38	11.94	6.87	0.61	1.14
Total	1.27	2.06	0.16	0.42	0.11	0.31	9.68	7.67	0.33	0.77

Note. HE = Code for helping; SH = Code for sharing; CO = Code for cooperation; SE = Code for social engagement; ES = Code for emotional support.

Table 2

Means and Standard Deviations of Observed Negative Behaviours for At-risk Status and Gender

	Observed Negative Behaviours									
	NV		NP		SU		NG		NS	
At-risk Status	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
At-risk										
Male	2.61	4.06	0.55	1.04	2.94	5.78	7.166	9.09	1.94	2.60
Female	2.33	1.93	0.22	0.44	3.22	2.81	12.00	7.00	4.55	4.66
Total	2.51	3.45	0.44	0.89	3.03	4.93	8.77	8.63	2.81	3.56
Not at-risk										
Male	6.00	7.24	0.33	0.59	0.94	1.86	4.61	4.55	1.50	2.47
Female	9.44	11.95	0.00	0.00	2.77	1.92	6.11	3.01	5.33	3.60
Total	7.14	9.00	0.22	0.50	1.55	2.04	5.11	4.10	2.77	3.37
Total										
Male	4.30	6.03	0.44	0.84	1.94	4.35	5.88	7.20	1.72	2.51
Female	5.88	9.08	0.11	0.32	3.00	2.35	9.05	6.04	4.94	4.06
Total	4.83	7.14	0.33	0.72	2.29	3.81	6.94	6.94	2.79	3.43

Note. NV = Code for negative verbal; NP = Code for negative physical; SU = Code for sulking; NG = Code for negative general talk; NS = Code for negative self talk.

Table 3

Means and Standard Deviations of Observed Prosocial and Negative Behaviours for Dyad Type

		Dyad Type	
Observed Behaviours		Target	Comparison
Helping	*M*	1.11	1.22
	SD	1.97	1.98
Sharing	*M*	0.20	0.16
	SD	0.49	0.37
Cooperation	*M*	0.03	0.14
	SD	0.19	0.35
Social Engagement	*M*	9.72	9.44
	SD	6.97	7.43
Emotional Support	*M*	0.27	0.35
	SD	0.56	0.95
Negative Verbal	*M*	2.50	6.75
	SD	3.68	8.42
Negative Physical	*M*	0.42	0.94
	SD	0.18	0.51
Sulking	*M*	2.98	1.11
	SD	4.77	1.73
Negative General Talk	*M*	7.62	4.61
	SD	10.51	4.34
Negative Self Talk	*M*	2.51	2.38
	SD	3.30	3.23

Table 4

Correlations Between Observed Prosocial and Negative Behaviours and Adaptive Skills

	Adaptive Skills (BASC)	
	Teacher Report	Self Report
Observed Behaviours	Adapt. Skills Comp.	Pers. Adj. Comp.
Helping	.215	-.113
Sharing	.121	-.084
Cooperation	.117	.120
Social Engagement	.223	.024
Emotional Support	.086	.115
Negative Verbal	-.170	-.097
Negative Physical	-.287*	-.051
Sulking	-.166	-.062
Negative General Talk	-.123	-.267*
Negative Self Talk	.016	-.025

Note. Adapt. Skills Comp. = Adaptive Skills Composite; Pers. Adj. Comp. = Personal Adjustment Composite. *$p < .05$.

CHAPTER 5

Discussion

The main purpose of the present study was to investigate differences between adolescents at-risk and not at-risk for EBD, and between females and males, in the prosocial and negative behavioural strategies employed during a competitive activity. Adolescents were studied in hopes of contributing further insight to the social behaviour literature which is largely comprised of research on children. At-risk adolescents and target dyads were expected to enact prosocial strategies less frequently and negative strategies more frequently than their comparison counterparts. Females were expected to employ prosocial strategies more frequently than males. Moreover, higher rates of negative verbal behaviour and negative physical behaviour were predicted to occur among females and males, respectively. Although limited, some differences were found between at-risk and comparison adolescents, as well as females and males.

Observed Prosocial and Negative Behavioural Strategies

Group differences (at-risk versus comparison). Contrary to what was predicted, adolescents identified through teacher-report to be at-risk for EBD did not employ less prosocial strategies than adolescents identified as comparison. From a social skills deficit perspective, adolescents with EBD are expected to demonstrate deficient social skills (Spence, 2003). Although deficient social skills are often conceptualized as a lack of prosocial strategies, adolescents at-risk for EBD may in fact possess prosocial skills. It is possible that the difficulties of at-risk adolescents may manifest more so in their overuse of negative strategies. In the present study, adolescents at-risk for EBD more frequently engaged in general negative talk than adolescents not at-risk. At-risk adolescents did not

significantly differ from their comparison counterparts on other negative strategies (e.g., negative physical behaviour, negative self talk, etc.), however, this may not be an accurate reflection of the at-risk adolescents' reliance on negative strategies in their everyday lives given the time-limited and constrained nature of the study's task. Indeed, the presence of maladaptive tendencies, assessed through the BASC-TRF, was the basis for the identification of at-risk status in the first place.

There is empirical evidence consistent with the proposition that individuals at-risk for EBD may over rely on negative strategies. In some studies, negative behaviour appears to be a more powerful factor than positive behaviour in differentiating between individuals with and without EBD (e.g., Grenell et al., 1987; Merrell & Boelter, 2001). Negative behaviour may figure more prominently in the behavioural repertoires of individuals with EBD given that maladaptive tendencies are proposed to reflect deficits in cognitive as well as emotional regulatory systems (Pope & Bierman, 1999). Thus, individuals with EBD, who are identified based on maladaptive tendencies, may have core deficits which predispose them towards negative behaviour and which overpower any prosocial tendencies.

There is also evidence that prosocial acts are reinforced when enacted by prosocial individuals, but not when enacted by individuals who are not viewed as prosocial in general (Eisenberg & Fabes, 1998). Consistent with SIP theory (Crick & Dodge, 1994), although individuals at-risk for EBD may possess prosocial skills, they may not be motivated to behave prosocially given their lack of reinforcement for their prosocial actions in the past. Moreover, from the SIP perspective, social goals are proposed to be a critical motivating factor underlying behavioural enactment (Erdley &

Asher, 1999). Given the competitive nature of the study's task, it is possible that comparison adolescents were less motivated to behave prosocially given that such behaviour would be in conflict with goal achievement. That is, the social situation may have affected comparison adolescents' normal prosocial tendencies such that they were observed to engage in prosocial acts to the same degree as their at-risk counterparts.

Further contrary to expectation, comparison adolescents were found to be more verbally negative towards their interaction partners than at-risk adolescents. It is possible that comparison adolescents engaged in verbal aggression as a tactic in trying to "beat" their partner. Indeed, examples of behaviour coded within the negative verbal category included critical comments such as "You suck" and "You're not gonna win". Verbal aggression may also have appeared less frequently among adolescents at-risk for EBD given that some of them were identified as internalizing. Adolescents with internalizing difficulties may be expected to direct negative comments towards themselves more than towards others.

Furthermore, it may be possible that verbal aggression (e.g. cursing, calling peers derogatory terms like idiot) becomes common in adolescent peer culture. Evidence of the "normative" nature of aggressive acts among adolescents, however, is restricted to physical aggression among adolescent males during conflictual situations (e.g., Coie, Terry, Zakriski, & Lochman, 1995).

Gender differences. As predicted, females demonstrated greater prosociality than males. Specifically, females were more helpful towards their partners. This is consistent with socialization theory in which it is hypothesized that females are socialized to be other-oriented and empathetic (Maccoby, 2000). There is empirical evidence in support

of this hypothesis (Eisenberg & Fabes, 1998). It is further hypothesized that males are socialized to be self- and goal- oriented (Maccoby). Thus, males may be particularly less likely than females to engage in behaviours which benefit others within a competitive context. In fact, there is evidence that males tend be more competitive, and that competitive tendencies are often associated with a lower usage of prosocial tactics (Crick & Dodge, 1994; Tassi & Schneider, 1997).

In regards to negative behaviour, females and males were not differentiated as expected by the categories of negative physical and verbal behaviour. Females, however, engaged in negative self talk more frequently than males. As discussed above, males tend to be more competitive in nature. Their competitive tendencies are largely fostered within their male play groups (Maccoby, 2000). Thus, male participants may have been more confident and self-assured, and thus less likely to be self-derogatory, given they were engaged in a male-on-male competitive exchange. There is evidence, on the other hand, that females tend to withdraw from competition (e.g., Charlesworth & Dzur, 1987). Therefore, female participants may have been less at ease with the task, especially since the competitive goal was imposed upon them. Hence, females may have been particularly hard on themselves in response to their situation.

Dyadic Effects on Observed Behaviour

Differences in prosocial and negative behaviours were also examined at the dyadic level. That is, in addition to consideration of individual behaviour, the present study involved examination of the combined social behaviour of dyadic interaction partners. In contrast to what was hypothesized, target and comparison dyads were not found to differ significantly in regards to frequency of prosocial interactions. This finding

may reflect the previously discussed proposition that individuals at-risk for EBD may not necessarily lack prosocial skills.

Further contrary to expectation, negative verbal interactions were observed more frequently among comparison dyads than target dyads. As previously mentioned, verbal aggression could be used as a tactic in response to a competitive task. Moreover, verbal aggression could be a part of today's adolescent peer culture. Even in light of these possibilities, it is difficult to make sense of the greater frequency of negative verbal interactions among comparison dyads. This finding could be an anomaly of this particular sample which was very limited in size.

Consistent with what was hypothesized, target dyads engaged in more sulking than comparison dyads. From the SIP perspective, individuals with maladaptive tendencies are hypothetically predisposed towards enacting maladaptive strategies (Crick & Dodge, 1994). Furthermore, according to Coyne's interactional model (Coyne, 1976), the interaction partners of individuals with EBD are prone towards less positive, and possibly negative, behavioural responses. Thus, it is reasonable to expect exchanges between an at-risk adolescent and an adolescent not at-risk for EBD to be marked by expressions of frustration, particularly when the exchange is of a competitive, potentially stressful nature.

Links Between Actual Behaviour and Reported Behaviour

As expected, a negative relationship emerged between observed negative behaviour and teacher- and self- reported adaptive behaviour. Although correlations were modest, this finding may reflect consistency in the adolescents' enactment of negative strategies across settings and time.

Limitations of the Present Study

In the larger study from which the present study's sample was drawn, adolescents at-risk for EBD were identified within the general population. Given the incidence rate of EBD within the general population, it was not surprising that a small sample size of at-risk adolescents was obtained. Although adolescents identified to be at-risk for EBD fell in one of three specific categories (internalizing, externalizing, or combination), limited numbers did not allow for the separation of the adolescents by the type of difficulties they experienced. In addition to limited sample size, an unequal number of males and females were identified to be at-risk. Males outnumbered females by half in the present study.

The present study was also limited in that participants were observed during a restricted period of time. Moreover, participants were knowingly videotaped. Awareness of being observed may have affected the expression of participants' social behaviour as it usually occurs within more natural environments. Nonetheless, the study's competitive task presented the opportunity to observe social behaviour within a specific context. From the SIP perspective it is important to consider context given the proposed influence of social goals on behavioural enactment.

Future Directions and Implications

Given the possible influential role of social goals on behavioural enactment, examination of adolescent dyadic exchanges across different tasks could provide insight into the findings of the present study. In the present study, at-risk and comparison adolescents did not differ in their use of prosocial strategies. Since adolescents were engaged in a competitive task, it is possible they were concerned with their own performance, and thereby, less likely to employ prosocial tactics. Thus, any differences

between at-risk and comparison adolescents in regards to prosocial ability may not have come through given the nature of the social exchange. To further investigate this possibility, it could be useful to observe adolescents' dyadic interactions during a cooperative task. Adolescents may be more likely to access their prosocial skill set when they must work with their partner to meet a mutual goal. Thus, during a cooperative task, prosocial ability may be more pronounced, and consequently, differing levels of ability may become more apparent. In addition to prosocial behaviour, negative behaviour could be affected by type of task. In the present study, at-risk adolescents engaged in more general negative talk than their comparison counterparts. Would such a finding emerge with a cooperative task given that it may be less stressful and emotionally provocative than a task involving competition?

In addition to the influence of social context on behavioural enactment, the possibility that adolescents at-risk for EBD may possess and be capable of employing prosocial strategies is an interesting viewpoint to consider. According to traditional conceptualizations of EBD, individuals with EBD are expected to demonstrate deficient prosocial skills. However, in the present study, at-risk adolescents did not differ from their comparison counterparts in regards to prosocial behaviour. Could it be possible that adolescents at risk for EBD do not necessarily lack prosocial strategies, but rather tend to over-rely on negative strategies? That is, could the root of their maladjustment lie in their over-reliance on negative strategies despite knowledge of prosocial alternatives?

The above viewpoint has implications for practitioners and researchers. For example, in the treatment of adolescents with EBD, a successful approach may be to address their strengths and positive skills as well as their negative behavioural tendencies

(e.g. instead of focusing only on teaching prosocial skills). To facilitate such a treatment approach, it would be useful to further explore factors underlying the use of negative strategies. For example, it may be beneficial to gather further insight regarding the role of mechanisms and activities involved in the processing of social information in the enactment of negative behaviours. Specifically, which aspects of SIP (e.g. goal formulation) influence negative tendencies to persist even though prosocial alternatives are part of an EBD adolescent's behavioural repertoire?

Intervention efforts for EBD may also benefit from further exploration of gender differences in the use of prosocial and negative strategies. In the current investigation, relative to males, females were found to be more helpful, as well as more critical towards themselves. It would be valuable to acquire further understanding of any particular areas of strength and difficulty for each gender so that intervention strategies may be developed or modified accordingly.

Conclusion

In the present study, adolescents at-risk for EBD did not appear deficient in their prosocial ability. However, although at-risk adolescents may be capable of behaving in a socially skillful manner, it is possible that their negative behavioural strategies overpower any existing prosocial tendencies. An over-reliance on negative strategies may be due to deficiencies or maladaptive tendencies in the processing of social information. For example, after assessing their situational context (e.g. competition for a prize), adolescents at-risk for EBD may be more likely than their peers who are not at-risk to formulate maladaptive goals (e.g. winning at any cost) which may lead to the enactment of undesirable, goal-congruent behaviours. Further insight as to which aspects of SIP are

most relevant to EBD could prove valuable for intervention and treatment efforts. In the structuring of intervention and treatment programs, it may also prove valuable to consider possible gender differences in the salience of specific prosocial and negative strategies.

In sum, findings of the present study provide various avenues for further investigation which may have implications for the treatment of EBD. Hopefully this knowledge can ultimately make a difference in the lives of adolescents who struggle with EBD.

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Appendix A

Prosocial Behaviour Coding Scheme

Social Engagement: Positive verbal interactions including small talk, self-disclosure, sharing of personal thoughts or stories, good-natured humour. (e.g., "I don't really like French. How about you?", "This weekend I went to a movie.")

Provision of Emotional Support: The provision of encouragement (e.g., "Just keep working. You can do it.") and compliments (e.g., "You're really good at this stuff!") as well as attempts to validate another's feelings (e.g., "I know this is pretty tough, huh? KNEX can be frustrating.").

Helping: The offer and/or provision of physical assistance (e.g., a participant puts together a part of the model for his/her partner) or advice/information (e.g., a participant explains how the KNEX pieces attach).

Sharing: Giving up a personal resource (e.g., a participant gives his/her partner a KNEX piece) or facilitating access to a resource (e.g., a participant positions the instructions such that his/her partner has an equally good view).

Cooperation: Coordinating efforts to achieve a mutual goal (e.g., each participant is having difficulty building a part of the model so the dyad works together to figure out how to build the part).

Scoring: Frequency was calculated for each of the 5 prosocial behaviours. When a prosocial act was observed, the appropriate code (e.g., social engagement, helping, etc.) was given and counted as 1 occurrence of that particular prosocial behaviour. Each occurrence of a particular prosocial behaviour was summed to produce a frequency score for that behaviour.

Appendix B

Negative Behaviour Coding Scheme

Negative Verbal Behaviour: Negative verbalizations directed at another person including threats, teasing, sarcasm, or name-calling (e.g., "You are so dumb.", "Duh! Hello! Is anyone home?").

Negative Physical Behaviour: Hitting, pushing, grabbing objects away from one's partner, or throwing pieces.

Sulking: Nonverbal (e.g., heavy sighing) and verbal (e.g., whining "Oh, my God! in an exasperated tone) expressions of frustration or disappointment.

General Negative Talk: Verbalizations which are derogatory or negative in nature and are not directed towards one's partner or oneself (e.g., "KNEX is so stupid.").

Negative Self Talk: Verbalizations which are derogatory and critical towards oneself (e.g., "I suck at KNEX.").

Scoring: Frequency was calculated for each of the 5 negative behaviours. When a negative act was observed, the appropriate code (e.g., sulking, negative self talk, etc.) was given and counted as 1 occurrence of that particular negative behaviour. Each occurrence of a particular negative behaviour was summed to produce a frequency score for that behaviour.

Appendix C

Sample of Parent Information Letter

Dear Parent(s) or Guardian(s),

I am a professor in the Department of Educational Psychology at the University of Alberta. I have worked with children and adolescents (ages 3 to 18) across a variety of educational and community settings. I am especially interested in how adolescents solve social problems with their friends and in gaining a better understanding of what adolescents *know* and what they *do*. I am looking for participation from your son/daughter.

Adolescents involved in this project will be asked to participate in various activities both individually and in pairs. For example, they may be asked to build a K-Nex model. We are interested in looking at turn-taking and procedural issues (how adolescents decide who does what during the task). Students will also be asked about their own behavior (i.e., how they solve conflicts or dilemmas with their peers, and what strategies they use and why) and how they think their peers solve conflicts. Certain students will also be required to complete visual puzzles, define words, and solve 3 social dilemmas (e.g., "What would you do if someone wouldn't share some library books?"). In total, your son/daughter will be participating for a maximum of 3 hours spread out over a 6-8 week period (e.g., 30 minutes every other week). Finally, in order to obtain a teacher's perspective on adolescents' interactions classroom teachers will also be asked to fill out a behaviour rating scale that assesses a variety of classroom behaviours, school problems, and adaptive skills.

You have my commitment that the confidentiality of all information gathered from your child remains assured. All responses obtained from your son/daughter will remain confidential and will be identified by a code number, and not by name, on the material associated with the study. Some students will be selected to participate in videotaped activities. The K-Nex tasks will be videotaped. No one other than the project team will view the tapes. Students' identities will be protected at all times. Videotapes of the students building models or puzzles will be kept in a locked cabinet and only the project team will view the data. Data from this study will be kept for at least five years. Since participation is completely voluntary, your son/daughter may withdraw from the study at any time. They do not have to give a reason for dropping out, just tell the researcher or project coordinator. There is no penalty to your child should they wish to withdraw from participating.

Once the study is completed you will receive a summary of the general findings. For particular information, I am available for one-on-one feedback sessions.

The benefits of this project include:

1. Promoting leadership, social perspective-taking, and problem-solving skills;
2. Encouraging adolescents' self-awareness and self-evaluation of their behaviors and the influence these may have on others;

Appendix D

Parent and Adolescent Consent Forms

University of Alberta

PARENT CONSENT FORM

I, _____, hereby
(print name of parent/legal guardian or independent student)

☐ consent

☐ do not consent

for _____ to
(print name of student)

- Be interviewed
- Be tape-recorded during interviews
- Be videotaped while building K-Nex models with a classmate
- Have a behavior rating scale completed by their teacher
- Fill out a rating scale that assesses a variety of their won classroom behaviours
- Complete a brief assessment that involves solving visual puzzles, defining words, and solving 3 social dilemmas

by Dr. Christina Rinaldi and her trained research team

I understand that:

- My son/daughter may withdraw from the research at any time without penalty
- All information gathered will be treated confidentially and used for the sole purpose of research
- Any information that identifies my son/daughter will be destroyed upon completion of this research (to be finished in about 5 years)
- My son/daughter will **not** be identifiable in any documents resulting from this research

I also understand that the results of this research will be used only in the following:

- Presentations and written articles for other developmental researchers, educators, parents, and schools
- General feedback sessions with parents, teachers, and students

_____
signature of parent/legal guardian

Date signed: _____